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XuFan Tseng

May 11, 2009

Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/783,652
Applicants : Mark L. Dewis *et al.*
Filed : February 20, 2004
Title : Alkylidenamides Exhibiting Taste and Sensory Effect in
Flavor Compositions
Art Unit : 1761
Examiner : Leslie A. Wong
Confirmation No. : 7348
Attorney Docket No. : IFF-53-1

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 CFR § 41.37

Dear Sir/Madam:

This Appeal Brief is submitted in support of the appeal from the Primary Examiner's September 15, 2008 final rejection of claims 17-23 in the above-identified application. Applicants submit this Appeal Brief in furtherance of the Notice of Appeal filed March 16, 2009 under CFR § 41.31. The Commissioner is authorized to charge any required fees and any additional fees, or credit any overpayment to the Deposit Account No. 12-1295 in connection with this matter.

(I) REAL PARTY IN INTEREST

The real party in interest is International Flavors & Fragrances Inc., the assignee of the above-identified application.

(II) RELATED APPEALS AND INTERFERENCES

Appellants believe there are no related appeals or interferences that will directly affect or will be directly affected by the Board's decision in the present appeal.

(III) STATUS OF CLAIMS

The application as filed contained claims 1-16.

In the February 20, 2004 Preliminary Amendment, claims 1-7 were canceled.

In the April 5, 2007 Amendment, claim 8 was canceled, claims 9-16 were withdrawn, and new claims 17-22 were added.

In the September 7, 2007 Amendment, claims 9-16 were canceled and new claim 23 was added.

All of the pending claims (i.e., claims 17-23) have been rejected and are the subject of this appeal.

(IV) STATUS OF AMENDMENTS

No amendments have been filed subsequent to the September 15, 2008 Final Office Action.

(V) SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to a novel compound, 2,6-nonadienamide, N-ethyl-, (2E,6Z), a foodstuff or a beverage comprising this novel compound, and a process for augmenting or imparting a taste or somatosensory effect to a foodstuff or a beverage by adding this novel compound.

Independent claim 17 recites a compound, the compound is 2,6-nonadienamide, N-ethyl-, (2E,6Z);¹

Dependent claim 18 depends from claim 17, and contains further limitations to claim 17;² Dependent claim 19 depends from claim 18, and contains further limitations to claim 18;³

Dependent claims 20 and 23 depend from claim 17, and contain further limitations to claim 17;⁴

Dependent claim 21 depends from claim 17, and contains further limitations to claim 17;⁵ Dependent claim 22 depends from claim 21, and contains further limitations to claim 21.⁶

(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 17-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Galopin *et al.* (Abstract 0056, 224th American Chemical Society National Meeting, Aug 2002) (hereinafter “Galopin”).

(VII) ARGUMENT

Claims 17-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Galopin. For the reasons set forth below, Appellants respectfully traverse the rejection of claims 17-23.

In the July 8, 2004 Information Disclosure Statement, Applicants submitted the full text article for the cited abstract (i.e., ACS Symposium Series 867, Challenges in Taste Chemistry and Biology, Sponsored by the ACS Division of Agricultural and Food Chemistry, 2004, Chapter 9, Pungent and Tingling Compounds in Asian Cuisine, Galopin *et al.*, pages 139-152). Thus, the full text article is hereby consulted and discussed for the full experimental results and complete conclusions.

¹ Specification at page 6, the 8th compound in the table; page 7, the 9th compound in the table; page 8, the 6th compound in the table; page 21, lines 23-31

² Specification at page 12, lines 21-24; page 13, lines 1-3

³ Specification at page 13, lines 31-33

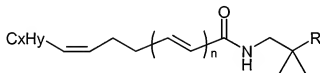
⁴ Specification at page 13, lines 22-25; page 30, lines 1-19

⁵ Specification at pages 4-5; page 6, lines 21-24

⁶ Specification at page 11, lines 21-22

Examiner alleges that Galopin discloses a variety of sanshool derivatives for use in foods as is claimed and the claims only differ as to the specific substituents (*See*, Office Action, page 2, lines 10-14). Examiner further alleges that Galopin discloses a minimal structure and address the synthesis of derivatives (*See*, Office Action, page 2, lines 15-16). Examiner, therefore, concludes it would have been obvious to a person of ordinary skill in the art to use the claimed substituents in that of Galopin because once the minimal structure has been identified, the manipulation of substituents is no more than conventional in the art (*See*, Office Action, page 2, lines 20-23).

As admitted by the Examiner, Galopin discloses a minimal structure required for sanshool and bungeanool-type chemicals to be pungent (*See*, Office Action, page 2, lines 15-16; Galopin, page 146, lines 1-3). The minimal structure is set forth below:



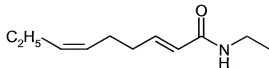
Minimal Structure: $\text{R} = \text{H}$, $n = 1$, $x = 1$

Optional Features: $\text{R} = \text{OH}$, $n = 2$, $x > 2$

Noticeable Pungency = Minimal Structure + two Optional Features

(*See*, Galopin, page 146, lines 4-9; page 149, Figure 4). The above minimal structure contains an N-isobutyl group.

In contrast, the claimed compound 2,6-nonadienamide, N-ethyl-, (2E,6Z) is as follows:⁷



The claimed compound contains an N-ethyl group.

⁷ Specification at page 8, the 6th compound in the table

It is evident the claimed compound differs from Galopin's minimal structure at least in the N-substituent. Thus, the claimed compound does not contain Galopin's minimal structure, let alone any of the optional features. One skilled in the art can not arrive at the claimed compound simply by manipulating the substituents of the required minimal structure in Galopin.

Further, "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant" (*See, In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994)). That the inventor achieved the claimed invention by doing what those skilled in the art suggested should not be done is a fact strongly probative of nonobviousness (*See, Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986), *on rehearing*, 231 USQP 160 (Fed. Cir. 1986)).

Here, first, Galopin specifically and expressly teaches that "isobutyl group was indeed required for pungency" (*See*, Galopin, page 150, section of "SAR Study of the N-Alkyl Group", lines 4-5). In contrast, the claimed compound contains no N-isobutyl group.

Secondly, Galopin explicitly teaches that "pungency was only noticeable when molecules had the required features plus two optional features" (i.e., $R = OH$, $n = 2$, and $x > 2$) (*See*, Galopin, page 146, lines 7-9). However, the claimed compound neither contains the required features (i.e., the minimal structure) nor any of the optional features (i.e., the claimed compound has no hydroxyl group; $n = 1$; and $x = 2$).

As such, Applicants achieved the claimed invention by not doing what Galopin taught is a fact strongly probative of nonobviousness.

In view of the foregoing, Appellants respectfully submit that Appellants have shown the claimed compound, 2,6-nonadienamide, N-ethyl-, (2E,6Z), is novel and patentable.

Conclusion

For the reasons set forth above, Appellants respectfully submit that claims 17-23 are patentable in view of the cited reference. Appellants respectfully request the Board of Patent Appeals and Interferences to reverse all of the Examiner's rejections as to all of the claims.

Respectfully submitted,



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(VIII) CLAIMS APPENDIX

1-16. (Canceled)

17. (Previously presented) A compound, said compound being 2,6-nonadienamide, N-ethyl-, (2E,6Z).

18. (Previously presented) A method of enhancing the salty taste of a foodstuff or beverage, said method comprising the step of adding a salt enhancing level of the compound of claim 17.

19. (Previously presented) The method of claim 18, wherein the salt enhancing level is from about 100 parts per billion to about 100 parts per million by weight.

20. (Previously presented) A foodstuff, said foodstuff comprising the compound of claim 17.

21. (Previously presented) A process for augmenting, enhancing, or imparting a taste or somatosensory effect to a foodstuff or beverage, said process comprising the step of adding a taste or sensation augmenting, enhancing, or imparting level of the compound of claim 17.

22. (Previously presented) The process of claim 21, wherein the level is greater than about 50 parts per billion by weight.

23. (Previously presented) A beverage, said beverage comprising the compound of claim 17.

(IX) EVIDENCE APPENDIX

None

(X) RELATED PROCEEDINGS APPENDIX

None